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REMARKS

This paper is responsive to the Non-Final Office Action mailed October 31, 2005. Claims 1-4, 6-8, 21-24, 26, 28 and 30 were examined, all of which were rejected. Claims 1-4, 6-8, 21-24, 26, 28 and 30 remain present in this application. Applicant has also added new claims 32-36, which are directed to disclosed subject matter (see, for example, Applicant's Figs. 5 and 6 and the discussion associated therewith), which was not previously explicitly claimed.

In the present Office Action: claims 1, 2, 3, 8, 28 and 30 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,881,264 (hereinafter "Kurosawa"); and claims 4, 6, 7, 21-24 and 26 were rejected under 35 U.S.C. §103(a) as being unpatentable over Kurosawa in view of U.S. Patent No. 6,473,832 (hereinafter "Ramagopal").

Applicant extends appreciation to the Examiner for issuing a Non-Final Office Action to allow Applicant further opportunity to address the above-noted rejections. Applicant also thanks the Examiner for discussing the case with Applicant's Employer's representative on December 2, 2005.

Applicant has amended independent claims 1, 21 and 28 for clarification. With respect to amended claim 1, Applicant respectfully submits that Kurosawa does not teach or suggest receiving an indication (that includes a corresponding index into a scoreboard) that a terminating event associated with an instruction has occurred. Nor does Kurosawa teach or suggest a scoreboard whose scoreboard entry is identified and invalidated, based on a received corresponding index that uniquely identifies a scoreboard entry corresponding to an instruction. To the contrary, Kurosawa merely discloses a scoreboard that includes an entry number (which may, for the limited purpose of the discussion herein, be equated to Applicant's index) that may, in one or more embodiments, be used to control the order of execution of memory accesses directed to a same memory location (see, for example, Fig. 43, col. 25, lines 14-37). While each of the Kurosawa scoreboard entries have a corresponding entry number (which also appears to also be a scoreboard entry), the Kurosawa entry numbers are not received in an indication that corresponds to an occurrence of a terminating event associated with an instruction. Nor are the Kurosawa entry numbers utilized to invalidate a scoreboard entry.

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As is disclosed (at col. 6, lines 53-57 of Kurosawa), a memory controller 10, in response to a synchronization operation from processor 1, sets synchronization flags for all valid entries entered in scoreboards 100, 110, 120 and 130 at "1" and maintains the flags for all invalid entries at "0." With reference to Kurosawa col. 8, lines 38-65, when a received memory access instruction is a memory access instruction, other than a synchronizing instruction, the memory controller 10 selects a corresponding scoreboard from the scoreboards 100, 110, 120 and 130 on the basis of the address of the received memory access instruction. The memory controller 10 selects an empty entry from all of the entries in the selected scoreboard and then enters the transferred memory access instruction in the selected entry.

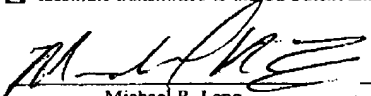
Under control of bank execution units 108, 118, 128 and 138 the Kurosawa memory controller 10 selects an entry from a scoreboard and issues an instruction in the entry. When an entry has been selected and issued, an enable flag for the selected entry is set to "NO." After processing of the issued memory access instruction has been completed, the memory controller 10 sets to "T" the valid flag stored in the entry for the executed memory access instruction in the scoreboard and resets the synchronization flag to "0." By these processes, the entry in which the executed memory access instruction has been entered is set free (see Kurosawa col. 9, lines 1-7). Thus, while the memory controller 10 may track an entry number in a scoreboard to determine which entry is to be invalidated (i.e., set free by modifying the flags noted above), the Kurosawa entry number is not received (or returned) upon completion of an associated instruction.

Additionally, with respect to independent claims 21 and 28, neither Kurosawa or Ramagopal (or the combination thereof) teach or suggest a load-store unit (or an execution stage unit) that returns one or more scoreboard indices that uniquely identify different scoreboard entries, which corresponds to a different instruction, and that are used to locate (or locate and invalidate) an entry in a scoreboard (or scoreboard unit). For at least the above reasons, Applicant's independent claims 1, 21 and 28 are allowable over the applied prior art of record. Additionally, Applicant submits that claims 2-4, 6-8, 22-24, 26, 30 and 32-36 are also allowable for at least the reason that they depend upon an allowable claim.

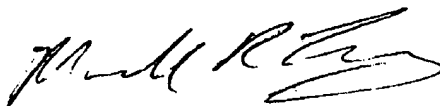
In summary, claims 1-4, 6-8, 21-24, 26, 28, 30 and 32-36 are in the case. All claims are believed to be allowable over the applied art of record, and a Notice of Allowance to that effect

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is respectfully solicited. Nonetheless, if any issues remain that could be more efficiently handled by telephone, the Examiner is requested to call the undersigned at the number listed below.

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 Michael R. Long	12-19-05 Date

Respectfully submitted,



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